

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference GHSP/503618WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/GB 03/00939	International filing date (day/month/year) 06.03.2003	Priority date (day/month/year) 06.03.2002	
International Patent Classification (IPC) or national classification and IPC B65D39/00			
Applicant BACCHUS WINE CLOSURES LIMITED et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 4 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 29.09.2003		Date of completion of this report 07.07.2004	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Janosch, J Telephone No. +49 89 2399-7525	



Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-13 as originally filed

Claims, Numbers

1-41 received on 11.06.2004 with letter of 08.06.2004

Drawings, Sheets

1 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☒ the claims, Nos. 42,43
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-38 .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-38
	No: Claims	
Inventive step (IS)	Yes: Claims	1-38
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-38
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item IV

Lack of unity of invention

1. The International Preliminary Examination Authority found separate inventions/groups of invention in this application. These inventions are:

I. Invention 1: Claims 1-38:

A stopper with a barrier layer comprising a reactive hot melt polyurethane adhesive.

II. Invention 2: Claim 39:

A method of applying a barrier layer to a stopper by forming a pre-polymer by combining an isocyanate solution with a polyol solution, applying it to the stopper and allowing the pre-polymer to cure.

III. Invention 3: Claims 40 and 41:

A method of applying a barrier layer to a stopper comprising applying reactive hot melt adhesive to one of a stopper and a partially formed barrier layer, allowing the hot melt adhesive to cool and contacting the stopper and the barrier layer such that bonding occurs.

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The only feature common to independent claims 1, 39 and 40 is a barrier layer applied to a stopper. This feature is known from the prior art, as disclosed by documents EP-A-1 270 703, WO-A-00/64647 or DE-A-39 40 461. The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the above mentioned groups of claims. Further, since the inventions 1-3 address different technical problems (invention 1: the provision of a thin film with limited oxygen permeability; invention 2: the provision of a pre-polymer; invention 3: Adhering a barrier layer) the inventions 1-3 cannot involve corresponding special technical features in the meaning of Rule 13.2 PCT and the inventions 1-3 lack unity in accordance with Rule 13.1 PCT.

2. The applicant was invited to restrict his application to one of the inventions mentioned above or alternatively to pay two additional examination fees. In the absence of any response the Examination Authority examined the invention defined by present claims 1-38.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: WO 00/64647 A (VINPAC INTERNAT PTY LTD ;MA ROSALIND (AU);
WILKS TERRY (AU); BRITC) 2 November 2000 (2000-11-02) and
D2: DE 42 25 092 A (KESSLER REINHARD) 4 February 1993 (1993-02-04).

- 2.1 Document **D1**, which is considered to represent the most relevant state of the art for the subject-matter of claim 1, discloses (cf. page 2, last paragraph; page 9, lines 1-19) a stopper comprising a barrier layer which comprises polyurethane from which the subject-matter of claim 1 differs in that the polyurethane has the form of a reactive hot melt adhesive.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as to avoid a further adhesive layer.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) since the cited prior art does not provide any hint to take a reactive hot melt polyurethane adhesive as barrier layer. Providing the polyurethane as reactive hot melt adhesive between two parts of the stopper has two advantages: it is not necessary to provide an additional adhesive and the barrier layer is protected between the two parts of the stopper.

- 2.2 Claims 2-27 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

- 2.3 Document **D2**, which is considered to represent the most relevant state of the art for the subject-matter of claim 28, discloses (cf. column 2, lines 19-51) a composite barrier layer from which the subject-matter of claim 28 differs in that the layer comprises a reactive polyurethane sub-layer.

The subject-matter of claim 28 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as to provide an alternative adhesive.

The solution to this problem proposed in claim 28 of the present application is considered as involving an inventive step (Article 33(3) PCT) since the prior art does not provide any hint to provide a reactive polyurethane sub-layer.

- 2.4 Claims 29-38 are dependent on claim 28 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VIII

Certain observations on the international application

1. Independent claims 1 and 28 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1 or D2) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT), as indicated in Item V 2.1 and 2.3 above.